

SOME NEW LEPIDOPTERA FROM THE EAST.

By THE HON. WALTER ROTHSCHILD.

PAPILIONIDAE.

1. *Teinopalpus imperialis himalaicus* subsp. nov.*Teinopalpus imperialis* Elwes (non Hope), *Tr. Ent. Soc. Lond.*, p. 421, n. 392 (1888) (Sikkim).

♀. Grey discal area of hindwing above generally paler than in the Khasia Hills individuals, posteriorly more extended yellow, discal black lunules R^3 — M^2 thinner, on underside the yellow colour reaches from abdominal margin to beyond M^1 , there are few black scales between M^1 and M^2 , middle of disc much less shaded with black scaling than in Assam form of *imperialis*, the black outer border of the discal area thin; in the Assam specimens the bars composing that border are generally heavy, the discal area is more or less shaded black, often all black from R^2 down to abdominal margin.

♂. Does not always differ from Assam specimens; but the orange-yellow area of the hindwing is mostly wider in front, especially on the underside, and the black lunules at the outer side of this area are thinner below.

Hab. Bhutan (*type*, F. G. Pileher *leg.*, May 10th, 1889), and Sikkim.

Mr. Ernest Swinhoe submitted to me for inspection a long series of Assam specimens, for which my best thanks are due to him.

2. *Papilio protenor thaiwanus* subsp. nov.

♂. Body as in *protenor*.

Wings above deeper black than in *protenor*, forewing without red patch at base; hindwing narrower from R^2 to M^2 , more produced at R^3 , an admarginal spot and a submarginal lunule at anal angle red.

Underside.—Forewing darker than in *protenor*, with very few red scales at base; internal angle without white scaling.—Hindwing: base of wing with the veins more broadly black than in *protenor*, the red colour rather deeper in tint, discal red bar R^3 — M^3 complete, joined to submarginal bar along R^3 and M^1 ; submarginal spots not luniform, but bar-like, much heavier than in *protenor*, standing much farther away from the edge of the wing, spots Sc^2 — R^2 $2\frac{3}{4}$ to 4 mm. broad, shaded with bluish white scales, spot R^2 — R^3 prolonged proximad along the veins, no spot before Sc^2 and no blue submarginal spots near this vein; red marginal spots smaller than in *protenor*, upper two absent.

Hab. Formosa, 1 ♂.

NYMPHALIDAE.

3. *Isodema formosanum* sp. nov. (Fig. 1).

The genus *Isodema* is distinguishable from *Penthema* by the following characters: Both the fore- and hindwing are much more rounded; D^2 of the hindwing is as long as, or only slightly shorter than, D^1 ; the patch of triangular scales at the base of the internal margin of the forewing below extends beyond SM^2 (while in *Penthema* it is anteriorly limited by that vein); and the second joint of the palpi is shorter and more hairy.

The species described below resembles in pattern very closely the ordinary streaked forms of *Penthema*, but agrees in the above characters with *Isodema*.

♂. Body above and below olivaceous black; head with four, pronotum with two white dots, a white spot behind eye; first and second joints of palpi white above, abdomen with a white line at each side below; tips of coxae and external side of femora with some white scales.

Wings, upperside, brownish black, streaked and spotted white.—Forewing: cell with four patches, two near base, two (larger) near apex; a series of



FIG. 1.

seven discal streaks, the two posterior ones the longest, no streak behind SM^2 ; seven postdiscal spots, more or less rounded, the upper one obscure, the last (M^2-SM^2) fused with the discal streak; seven submarginal spots, slightly smaller than the postdiscal ones, the submarginal spot M^2-SM^2 somewhat W-shaped; fringe white between veins.—Hindwing: cell nearly all white; discal streak $C-SM^2$ obscure or absent, following eight nearly as in *Penthema lisarda*, but inter-spaces broader black, and three last ones shaded with black; postdiscal and submarginal spots as in *P. lisarda*, but the latter sinuate outwardly as in *Isodema adelma*; fringe white between veins.

Underside paler brown, especially the hindwing.—Forewing: streaks and spots as above, but slightly larger; last submarginal spots more or less angle-shaped as in *I. adelma*.—Hindwing: spots and streaks much reduced, except submarginal ones, which are somewhat larger than above.

Length forewing, costal margin 41 mm., internal margin 31 mm.
 ,, hindwing, ,, 28 ,, ,, 29 ,,

Hab. Taipei to Kuehn, July 1896 (Jonas), 2 ♂♂.

The second specimen has the white markings more reduced than the type.

SPHINGIDAE.

4. *Ambulyx poecilus* sp. nov. (Fig. 2).

♂. Head, pronotum, and mesonotum dark green, the last with a pale creamy buff band at sides, widening behind; base of abdomen green above, rest of upperside of abdomen clayish buff (somewhat rubbed); underside of body buff-colour.

Wings, upperside.—Forewing: apex strongly produced, sickle-shaped; a dark green band from costal margin to M^2 , its basal edge sharply defined and crossing cell at basal side of M^1 ; at M^2 the band turns at a sharp angle towards internal margin: externally it gradually shades off, but it remains more distinct at M^2 to near internal angle of wing; basal area up to band pale buff, with an indistinct green band; outer half of wing clayish cream-colour, shaded with violet-black scales (green in live specimens?); outer margin greyish cream-colour, this area about 4 mm. wide at R^1 ; a grey line running from apex of wing very obliquely to R^1 , extending along this vein to near its base; apex of wing in front of that line with a dark green patch; an indistinct spot in internal angle ferruginous, bordered greyish proximally; fringe brown, slightly white between veins.—Hindwing geranium-pink from base to

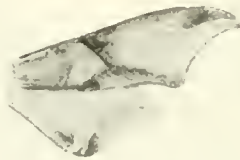


FIG. 2.

beyond middle: a brownish black band extends from anal angle to Sc^2 , gradually widening in front, posteriorly well defined; a pinkish buff line at its proximal side from abdominal margin to beyond M^1 , followed basally by a thin brown line, and this again by a broader pinkish buff line which terminates at M^2 , abdominal fold with a black streak; outer-marginal area as on forewing, extreme margin dark green, fringe cream-colour.

Underside.—Forewing red from base to beyond apex of cell, outer edge of this red area straight, rest of wing green, much shaded with yellow; a darker band from internal angle in a nearly straight line to costal margin, obscure in front, but obvious again behind costal margin, where it forms a dark green spot; outer-marginal area as above.—Hindwing green, shading with yellow, especially obviously so in abdominal region, three parallel thin green lines from abdominal margin to middle of wing, marginal area darker at anal angle, cream-colour from M^1 to Sc^2 .

Length forewing 34 mm.

„ hindwing 20 mm.

Hab. Murree, N.W. India, 1 ♂

This small *Ambulyx* bears a superficial resemblance in colour to *Smerinthus tatarinovi*. I do not know of any Indian *Ambulyx* with which this new species could be compared; it comes nearer to *rubricosa* Wlk. than to any other species.

SATURNIIDAE.

5. *Nudaurelia nereis* sp. nov. (Fig. 4).

♀. Closely allied to *N. sufferti* (Weym.), *Berl. Ent. Zeit.* XLI, p. 85, t. 8, f. 1. ♂ (1896) (Muanza, Victoria Nyanza), and *menippe* Westw. (Natal). Collar white as in *menippe*, but thinner: upperside of wings as in *sufferti*, eye-spots somewhat larger, hyaline centre of spot of forewing half as large again as in *sufferti*, subbasal white line of hindwing as in *menippe*, clearly marked.

Underside.—Forewing similar to that of *sufferti*, pinkish ochraceous rufous, discal line evenly curved, much closer to the eye-spot (only 1 mm. distant from it).



FIG. 3.



FIG. 4.

hyaline centre of the latter larger, outer-marginal region less sprinkled over with brown scaling.—Hindwing very different from that of both *sufferti* (Fig. 3) and *menippe*, pale salmon-buff; across middle of wing run two broad bands, pale cinnamon, both gradually shading off externally into the ground-colour, almost evenly convex at basal side and here well defined, the first crossing cell at origin of veins Sc^2 and M^2 , the other standing just at basal side of D^2 ; the second band much more arched than the first; the pale salmon-pink postdiscal area extended basal at R^2 to D^2 , the cinnamon band therefore deeply sinuate outwardly; middle line of cell darker brown, basal half of cell pale cinnamon; disc with few, costal area with many, brown speckles; outer-marginal area pale cinnamon; fringe brown, very restrictedly white between veins; hyaline spot upon D^2 elongate, thin.

Hab. Bopoto, Upper Congo (Rev. Oram).